

Maiya Yu

msh24@stanford.edu • mshyu@umich.edu • maiyayu.me

EDUCATION

Stanford University
Doctorate in Philosophy
Structural Biology

Palo Alto, CA
September 2021 – Present

University of Michigan College of Literature, Science, and the Arts
Bachelor of Science
Pure Mathematics, Biochemistry – High Honors; Minor in Computer Science

Ann Arbor, MI
September 2017 – May 2021

PUBLICATIONS

* indicates equal contributions

1. Makaía M. Papasergi-Scott*, Frank E. Kwarcinski*, **Maiya Yu***, Ouliana Panova, Ann M. Ovrutsky, Georgios Skiniotis, and Gregory G. Tall. Structures of Ric-8B in complex with G α protein folding clients reveal isoform specificity mechanisms. *Structure*, 2023
2. Jennifer Yeung, Rehem Adili, Emily N. Stringham, Rong Luo, Alexander Vizurraga, Luciana K. Rosselli-Murai, Hannah M. Stoveken, **Maiya Yu**, Xianhua Piao, Michael Holinstat, and Gregory G. Tall. GPR56/ADGRG1 is a platelet collagen-responsive GPCR and hemostatic sensor of shear force. *Proceedings of the National Academy of Sciences*, 2020
3. Alexander Vizurraga, Rashmi Adhikari, Jennifer Yeung, **Maiya Yu**, and Gregory G Tall. Mechanisms of Adhesion G protein Coupled Receptor activation. *Journal of Biological Chemistry*, 2020
4. Rui Qi, Brandon Walker, Zhifeng Jing, **Maiya Yu**, Gabriel Stancu, Ramakrishna Edupuganti, Kevin N. Dalby, and Pengyu Ren. Computational and experimental studies of inhibitor design for Aldolase A. *The Journal of Physical Chemistry B*, 123(28):6034–6041, 2019. PMID: 31268712
5. Wenxi Yu, **Maiya Yu**, Makaía M. Papasergi-Scott, and Gregory G. Tall. Production of phosphorylated Ric-8A proteins using Protein Kinase CK2. *Protein Expression and Purification*, 154:98 – 103, 2019

RESEARCH EXPERIENCE

Stanford University
Department of Structural Biology, Advisor: Dr. William Weis
Graduate Student

Palo Alto, CA
June 2022-Present

- Examining planar cell polarity signaling through a biochemical and structural biological lens.

Stanford University
Department of Structural Biology, Advisor: Dr. Giorgios Skiniotis
Rotation Student

Palo Alto, CA
April 2022 – June 2022

- Used cryo-electron microscopy to understand GPCR biology.

Stanford University
Department of Molecular and Cellular Physiology, Advisor: Dr. Brian Kobilka
Rotation Student

Palo Alto, CA
February 2022 – April 2022

- Screened methods and tools for formation of proteoliposomes for reconstitution into primary cells.

Stanford University
Department of Structural Biology, Advisor: Dr. William Weis
Rotation Student

Palo Alto, CA
January 2022 – February 2022

- Assembled toolkit of fusion proteins and antibody-based binders to promote structural insight into Frizzled receptor biology.

Stanford University
Department of Structural Biology, Advisor: Dr. Soichi Wakatsuki
Rotation Student

Palo Alto, CA
September 2021 – December 2021

- Used x-ray crystallography to develop and analyze peptide-based inhibitor candidates for mitofusin-1.

University of Michigan
Department of Pharmacology, Advisor: Dr. Gregory G. Tall
Undergraduate Research Assistant

Ann Arbor, MI
September 2018 – July 2021
October 2017 – April 2018

- Worked on and coordinated projects involving purification of heterotrimeric G proteins and G protein chaperones Ric-8A and Ric-8B for structural and functional analyses.

University of Texas at Austin
Department of Biomedical Engineering, Advisor: Dr. Pengyu Ren
Undergraduate Researcher

Austin, TX
June 2018 – August 2018

- Researched chemotherapeutic potential of several naphthalene-2,6-diyl-based Aldolase A inhibitors.

TEACHING EXPERIENCE

Math Lab, University of Michigan
Department of Mathematics
Math Tutor

Ann Arbor, MI
January 2019 – May 2021

- Tutored courses including Pre-Calculus, Calculus 1, 2 and 3, Differential Equations, and both proof-based and non-proof-based Linear Algebra.
- Adapted teaching style to meet different student needs.
- Provided guidance in small group and individual settings.

Virtual Tech Camps
iD Tech
Online Instructor

Remote
July 2020 – August 2020

- Taught weeklong virtual programming courses in C++, Python, and Scratch for elementary, middle, and high school students.
- Developed supplementary activities to support student knowledge and development of key programming skills.
- Implemented informal assessment measures and altered pedagogical techniques to ensure instruction is developmentally appropriate.

MWrite Program, University of Michigan
Department of Chemistry and Sweetland Writing Center
Senior Writing Fellow

Ann Arbor, MI
January 2021 – May 2021

- Coordinated logistics for other Writing Fellows and faculty to implement Write-to-Learn assignments in an introductory organic chemistry lab course.
- Planned and held weekly meetings to discuss prompt implementation and student success.
- Produced video to introduce students to the MWrite program.
- Set up and organized the use of Piazza as a class forum.
- Continued to hold office hours and provide students with feedback.

MWrite Program, University of Michigan
Department of Chemistry and Sweetland Writing Center
Writing Fellow

Ann Arbor, MI
January 2020 – May 2020
January 2019 – May 2019

- Supported students and faculty in implementation of Write-to-Learn assignments in second-semester Organic Chemistry lab course.
- Held office hours to support students in a one-on-one environment.
- Met with faculty and other fellows to discuss prompt implementation and student success.
- Provided technical support to students using the Canvas peer-review interface.
- Provided students with feedback on responses to encourage revision and deeper thinking.

PRESENTATIONS

BioTalk Seminar, Ann Arbor, MI

August 7, 2020

- **Oral Presentation**, A Dual-Dual Expression System for Purification of G Protein α Subunits and Heterotrimers

GPCR Retreat, Bromont, Quebec, Canada

September 27, 2019

- **Poster**, A Dual-Dual Expression System for Purification of G Protein α Subunits and Heterotrimers

Pharmacology SURF Symposium, Ann Arbor, MI

August 8, 2019

- **Oral Presentation**, A Dual-Dual Expression System for Purification of G Protein α Subunits and Heterotrimers

Biomedical Engineering Society Annual Meeting, Atlanta, GA

October 20, 2018

- **Poster**, Computational studies of novel inhibitors of aldolase A via molecular dynamic simulations

- Summer Scholars Symposium**, Austin, TX August 2, 2018
- **Poster**, Computational studies of novel inhibitors of aldolase A via molecular dynamic simulations
- UROP Symposium**, Ann Arbor, MI April 18, 2018
- **Poster**, Protein Kinase CK2 Phosphorylation of Ric-8A Potentiated its Enzymatic Activities Towards G protein α Subunits and Permitted its Crystallization

SERVICE

Structural Biology and Biophysics Student Committee Stanford University Biophysics Program <i>President</i>	Palo Alto, CA <i>August 2022– Present</i>
Diversity, Equity and Inclusion Committee Stanford University Department of Structural Biology <i>Member, Internal Subcommittee</i>	Palo Alto, CA <i>July 2022– Present</i>
Diversity, Equity and Inclusion Committee Stanford University Department of Structural Biology <i>Member, Outreach Subcommittee</i>	Palo Alto, CA <i>July 2021– July 2022</i>
Michigan Science Olympiad Board Michigan Science Olympiad <i>Board Member, Communications Director</i>	East Lansing, MI <i>August 2020– Present</i>
University of Michigan Science Olympiad University of Michigan <i>Executive Director</i>	Ann Arbor, MI <i>May 2019 – May 2021</i>
University of Michigan Science Olympiad University of Michigan <i>Human Resources Director</i>	Ann Arbor, MI <i>July 2017 – May 2019</i>

HONORS AND ACHIEVEMENTS

Leon P. Zukowski Award , University of Michigan Department of Mathematics <i>◦ For outstanding service in the Math Lab</i>	2021
Graduate Research Fellowship , National Science Foundation	2021-2026
University Honors , University of Michigan	Fall 2017, Winter 2018, Fall 2018, Winter 2020, Fall 2020, Winter 2021
Mary E. Wilsberg Scholarship , Grand Haven Area Community Foundation <i>◦ For a student who has not only excelled academically but has also demonstrated well-rounded community participation and service to others</i>	2017-2021
National Merit Finalist , National Merit Scholarship Corporation	2017-2018

OUTREACH

Science Olympiad Event Supervisor/Tournament Staff <i>◦ Michigan State Tournament, Write It Do It Division B</i> <i>◦ Santa Clara Regional Tournament, Bio-Process Lab Division B</i> <i>◦ Bay Area Regional Tournament, Bio-Process Lab Division B</i>	2023
Science Olympiad Test Writer <i>◦ Michigan Regions 10/13 Joint Tournament, Cell Biology Division C</i> <i>◦ Northern California State Tournament, Cell Biology Division C</i>	2023
Science Olympiad Coaches Clinic <i>◦ Michigan State Coaches Clinic, Write It Do It Divisions B and C</i> <i>◦ Michigan State Coaches Clinic, Food Science Division B</i>	2022
Science Olympiad Event Supervisor <i>◦ Michigan State Tournament, Write It Do It Division B</i> <i>◦ NorCal Joint Regional Tournament, Bio-Process Lab Division B</i> <i>◦ NorCal State Tournament, Bio-Process Lab Division B</i> <i>◦ National Tournament (Assistant Supervisor), WiFi Lab Division C</i>	2022

Science Olympiad Test Writer	2022
<ul style="list-style-type: none"> ○ Michigan Regions 4/5 Joint Tournament, Cell Biology Division C ○ Michigan Regions 10/13 Joint Tournament, Cell Biology Division C ○ Michigan Region 6 Tournament, Cell Biology Division C 	
Book-A-Biologist	2021
<ul style="list-style-type: none"> ○ Meet-A-Scientist Session, Virtual 	
Science Olympiad Coaches Clinic Presenter	2021
<ul style="list-style-type: none"> ○ Michigan State Coaches Clinic, Write It CAD It Divisions B and C 	
Science Olympiad Event Supervisor	2021
<ul style="list-style-type: none"> ○ Michigan Region 6 Tournament, Protein Modeling Division C ○ Michigan Regions 11 and 1 Joint Tournament, Write It CAD It Division B ○ Michigan Region 7 Tournament, Write It CAD It Divisions B and C ○ Michigan State Tournament, Write It CAD It Division B 	
Science Olympiad Event Supervisor	2020
<ul style="list-style-type: none"> ○ Michigan State Tournament, Write It Do It Division B (slated, ultimately canceled) 	
Science Olympiad Event Supervisor	2019
<ul style="list-style-type: none"> ○ Michigan Region 10 Tournament, Water Quality Divisions B and C ○ Michigan State Tournament, Write It Do It Division B 	